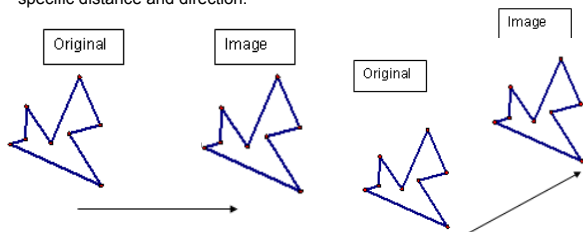


3.7 Translations

A **translation** is a transformation that slides a figure. It moves the original a specific distance and direction.



Translations can be described using coordinates.

$$(x, y) \longrightarrow (x + a, y + b)$$

Ex: $(x, y) \longrightarrow (x + 3, y - 2)$

Translate the following points using the above translation.

A (4, 8)

$A'(-7, 6)$

B (-5, 3)

$B'(-2, 1)$

C (2, -6)

$C'(5, -8)$

Write the translation mapping: $(7, 4) \longrightarrow (8, 10)$

$(x, y) \longrightarrow (x + 1, y + 6)$

Use the following translation on \overline{DE} .

Graph the original and the image.

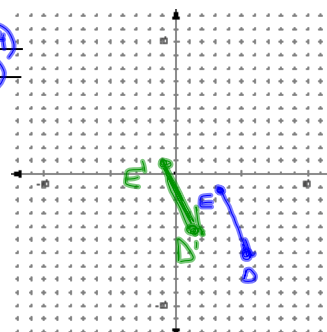
$(x, y) \longrightarrow (x - 4, y + 2)$

D (5, -6)

$D'(-1, -4)$

E (3, -1)

$E'(-1, 1)$

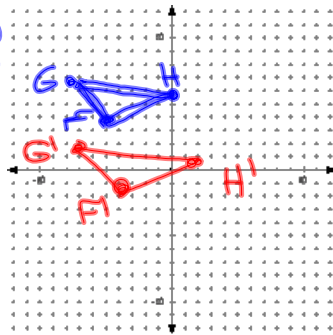


Use the following translation on $\triangle FGH$.

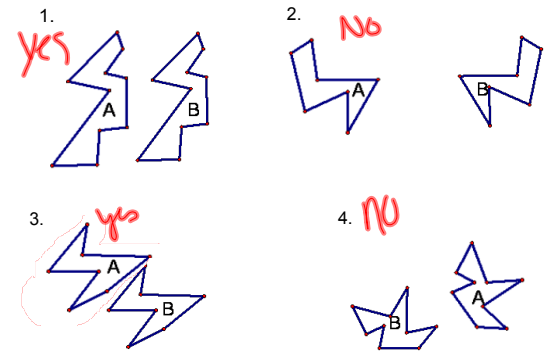
Graph the original and the image.

$$(x, y) \longrightarrow (x + 1, y - 5)$$

F (-5, 4) F' (-4, -1)
G (-8, 7) G' (-7, 2)
H (0, 6) H' (1, 1)



Are the following translations (from A to B)? (Yes/no)



Assignment:

p.155-157 9-14, 24-28, 32, 33, 38, 39